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Census Recensement

Canada 1986

USER'S GUIDE
TO
1986 CENSUS DATA
ON
INCOME

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Canada



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I. INTRODUCTION

The Census of Canada provides the most comprehensive data base on the characteristics of Canadians, their families and their households. The information ranges from sex and age of individuals to their ethnic origin, education, occupation and sources of income, and to their family and household characteristics.

A national census is a very large project consisting of various phases, each one of which is complex and consumes a large amount of both time and resource. The desired information has to be sought through a set of questions established after detailed consultations and tests, collected in a specific manner through trained enumerators, checked for inconsistencies and errors, the final results placed on a computer data base and selected data analyzed and published in a series of reports.

One of the important characteristics on which the 1986 Census asked questions concerned the sources of income of Canadians. For many purposes, information on the income of individuals and families is deemed essential. Income is the single most useful indicator of the economic wellbeing of Canadians. Most socio-economic analysis (of such factors as ethnicity and education), the evaluation of many programmes and policies (e.g. old age security, equality of opportunity, etc), many business decisions (e.g. opening of new plants and branches or retail outlets), and almost all welfare research (e.g. affordability of housing, changes in low income families) require relevant income data.

While a substantial amount of income statistics derived from the Census are published in various forms, a very large number of users -- individuals, research institutions, businesses, various levels of government, etc. -- request income data tailored to their own needs. In this respect, knowledge of the concepts underlying census variables and their limitations and quality would help users both to appreciate the available published data and to design suitable specifications for their own needs. This document is produced to serve as a guide to users of Census income data.

Section II explains the concept of income and its major components. Section III provides definitions of various sources of income and derived income variables. Included in that Section are brief definitions of a few important variables which are often used in conjunction with income. Section IV reproduces the 1986 Census questionnaire on income and comments on the collection and coverage of income data. Section V explains the processing undertaken in regional and head offices. Section VI describes the various phases of automatic processing to prepare the data for public release, while Section VII includes brief notes on the quality of income data. Section VIII lists the various products on income from the 1986 Census. Because of changes in concepts and coverage, all explanations in Sections II to VIII relate to 1986 Census. However, Section IX provides notes on the historical comparability of the 1986 income data with earlier censuses.

II. CONCEPTS AND COMPONENTS OF INCOME

1. CONCEPT OF INCOME

A mention of income without any qualification begs the question: "What is income?". When asked about his/her income, a working individual will mostly likely state his/her wage from work or profits from self-employment in a business activity, while a non-working or retired person will likely mention his/her income from investment or pension, etc. In some cases, government transfer payments such as unemployment insurance benefits, family allowances, etc., will be included in the answer.

Like most concepts, the income concept is generally tailored to an objective. Most surveys of individual and family income collect information on money income before taxes. For taxation purposes, certain receipts are not included in income. For national income measures, all goods and services produced by the nation are included.

Income is usually generated over time. It is generally stated as an amount per hour, week, month or year. It is, therefore, also important to clearly specify, in addition to the constituents of income, the time period for which the respondent is to report his/her income.

For the purposes of Census, **income includes all cash receipts from employment, investment, government transfer payments and other miscellaneous sources during the calendar year preceding the census. It excludes income in kind and lump sum payments.**

In addition to the constituents of income and the period it covers, it is also important to specify the 'income unit', that is, an individual, family, etc. who received income. Census collects income information from all individuals 15 years and over in a sample of households. From other information on the questionnaire, incomes for other units such as families, households, spouses, etc., can easily be calculated.

2. COMPONENTS OF INCOME

Income stems from many sources. These sources can be grouped broadly as follows:

(a) Employment income

The primary source of income from employment or work which may be undertaken either for others or for oneself. The monetary return is generally called a wage or a salary in the former case and income from self-

employment (profit/loss) in the latter case. The two components together are generally referred to as 'employment income' or 'earnings'.

(b) Investment income

The combined use of labour and capital results in self-employment income, while labour alone usually entitles one to a wage or salary. Use of capital alone also produces income, referred to as investment income, in the form of interest, dividends, rent, etc.

(c) Transfer payments

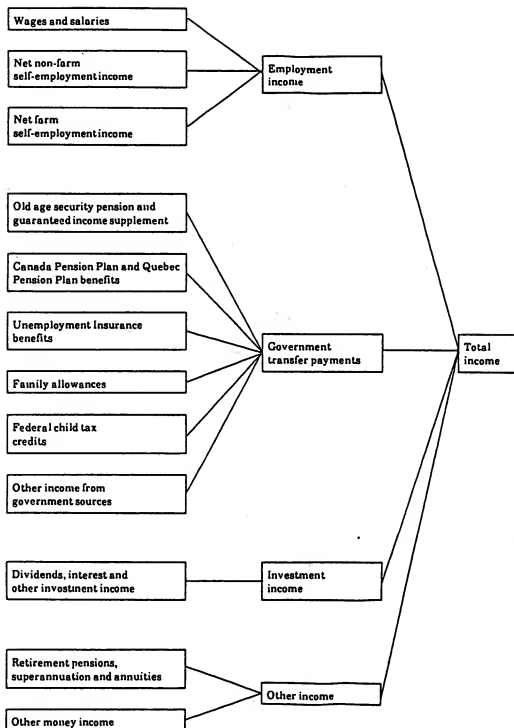
A very common source of income among Canadians is government transfer payments. These payments consist of demogrants which are more or less universal (e.g. old age security, family allowances), social insurance (e.g. Canada/Quebec Pensions Plans, unemployment insurance), income-tested assistance (e.g. child tax credits, guaranteed income) and needs-tested assistance (e.g. mothers' allowance).

(d) Other sources

Finally, income is also received from miscellaneous sources such as retirement pensions, alimony, etc.

The above broad framework is depicted in **Figure 1**. The items in the figure are based on the primary income data on the 1986 Census data base. Detailed definitions of the various components of income and related variables are given in Section III.

Figure 1 Components of Income



III. DEFINITIONS

1. SOURCES OF INCOME

(a) Wages and salaries

Refers to gross wages and salaries from all jobs, before deductions for such items as income tax, pensions, unemployment insurance, etc. Included in this source are military pay and allowances, tips, commissions, cash bonuses as well as all types of casual earnings in the calendar year 1985. The value of taxable allowances and benefits provided by employers such as free lodging, free automobile use, etc., is excluded.

Salesmen who worked for more than one company, or who maintained their own office or staff, were asked to report their commission as "non-farm self-employment" income. Also, persons baby-sitting in their own homes and newspaper boys/girls were asked to report their income in non-farm self-employment.

(b) Net Non-farm Self-employment Income

Refers to net income (gross receipts minus expenses of operation such as wages, rents, depreciation, etc.) received during calendar year 1985 from the respondent's non-farm unincorporated business or professional practice. In the case of partnerships, only the respondent's share of profits or loss was to be reported. Also included in this source is net income from persons babysitting in their own homes, operators of direct distributorships such as selling and delivering cosmetics, as well as from free-lance activities of artists, writers, music teachers, hairdressers, dressmakers, etc.

(c) Net Farm Self-employment Income

Refers to net income (gross receipts from farm sales minus cost of operation and depreciation) received during calendar year 1985 from the operation of a farm, either on own account or in partnership. In the case of partnerships, only the respondent's share of income was to be reported. Also included in this income source are advance, supplementary or assistance payments to farmers by federal or provincial governments. However, the value of income "in kind", such as agricultural products produced and consumed on the farm, is excluded.

Agriculture operations include production of field crops, vegetables, fruits, greenhouse and nursery products and seeds, maple products, raising poultry and livestock, production of animal products such as eggs, milk and wool, and fur farming and beekeeping.

(d) Old Age Security Pension and Guaranteed Income Supplement

Refers to Old Age Security pensions and Guaranteed Income Supplements paid to persons 65 years of age and over, and Spouses' Allowances paid to 60 to 64 year-old spouses of Old Age Security recipients by the federal government only during calendar year 1985. Also included are 'Extended Spouses' Allowances paid to 60 to 64 year-old widows/widowers whose spouses were Old Age Security pension recipients.

(e) Benefits from Canada/Quebec Pension Plan

Refers to benefits received during 1985 under the Canada or Quebec Pension Plans, e.g., retirement pensions, survivors' benefits, disability pensions.

Lump-sum death benefits from the Plans are not considered income. Retirement pensions of civil servants, RCMP and military personnel are reported separately under 'Retirement Pensions'.

(f) Benefits from Unemployment Insurance

Refers to the total unemployment insurance benefits received in calendar year 1985, before income tax deductions. It includes benefits for sickness, maternity, fishing, work sharing, retraining and retirement received under the Federal Unemployment Insurance program.

(g) Family Allowances

Refers to federal as well as provincial allowances paid during calendar year 1985 in respect of children under 18 years of age are included. (These allowances, though not collected directly from the respondents, were calculated and included in the income of one of the parents.)

(h) Federal Child Tax Credit

Refers to federal child tax credits paid during calendar year 1985 in respect of children under 18 years of age included. (These credits, though not collected

directly from the respondents, were calculated and included in the income of one of the parents.)

(i) Other Income from Government Sources

Refers to all transfer payments excluding those listed above received from federal, provincial or municipal programs in calendar year 1985. Included are transfer payments received by persons in need such as mothers with dependent children, persons temporarily or permanently unable to work, elderly individuals, the blind and the disabled. Provincial income supplements to recipients of Old Age Security and Guaranteed Income Supplement are also included as are the provincial payments to seniors to help offset accommodation costs. Also included are other transfer payments such as for training under the National Training Program (NTP), veterans pensions and allowances, workers' compensation, etc. Finally, provincial tax credits and allowances claimed on the income tax return are included as, for example, "Nova Scotia Tax Credits", "New Brunswick Tax Credits", "Quebec Real Estate Tax Refund", "Ontario Tax Credits", "Manitoba Tax Credits", "Alberta Royalty Tax Credits", "Alberta Tax Credits", "British Columbia Tax Credits" and "Yukon Territory Tax Credits".

(j) Investment Income

Refers to interest received in calendar year 1985 from deposits in banks, trust companies, co-operatives, credit unions, caisses populaires, etc., as well as interest on savings certificates, bonds and debentures and all dividends from both Canadian and foreign stocks. Also included is other investment income from either Canadian or foreign sources such as net rents from real estate, mortgage and loan interest received, regular income from an estate or trust fund, and interest from insurance policies.

(k) Retirement Pensions, Superannuation and Annuities

Refers to all regular income received during calendar year 1985 as a result of having been a member of a pension plan of one or more employers. This source includes payments received from all annuities, including payments from a matured registered retirement savings plan (RRSP) in the form of a life annuity, a fixed term annuity, a registered retirement income fund or an income-averaging annuity contract; pensions paid to widows or other relatives of deceased pensioners; pensions of retired civil servants, Armed Forces personnel and RCMP officers; annuity payments received from the Canadian Government Annuities Fund, an insurance company, etc. Severance pay and

retirement allowances and pensions from outside Canada are included in "Other income".

Lump-sum death benefits, lump-sum benefits or withdrawals from a pension plan or RRSP or refunds of over-contributions are not considered income.

(1) Other Money Income

Refers to regular cash income received during calendar year 1985 and not reported in any of the above sources. Alimony, child support, periodic support from other persons not in the household, net income from roomers and boarders, income from abroad (except dividends and interest), non-refundable scholarships and bursaries, severance pay, royalties, strike pay, etc., are reported in this source.

2. TOTAL INCOME

Total income is the sum of amounts received during 1985 by an income recipient from the fourteen sources listed and defined above. The amounts against the various sources and against total income are actual dollars reported or assigned. Although the census questionnaire includes a question on "total income", that information was used only for control purposes. The final variable "total income" is derived by summing all the sources of income after those sources have been processed through edit and imputation.

It is important to note that the Census income concept does not include gambling gains and losses, money inherited during the year in a lump sum, capital gains or losses, receipts from the sale of property or personal belongings, income tax refunds, loans received, loans repaid to an individual as the lender, lump sum settlements of insurance policies, rebates of property taxes and other taxes, and refunds of pension contributions were excluded as well as all income in kind such as free meals, living accommodation, or agricultural products produced and consumed on the farm.

3. DERIVED INCOME VARIABLES

From the sources of income (and sometimes in combination with other related variables), a number of other income variables are derived and placed on the Census data base. The most important of these variables is, of course, "total income", as described above. Others are briefly explained below.

(a) **Employment Income**

Employment income, also known as earnings, consists of total income received during 1985 as wages and salaries, net income from non-farm self-employment and/or net farm income.

(b) **Census Family Income**

A census family consists of a married couple with or without never-married children, or a lone parent with one or more never-married children. The total income of a census family is the sum of the total incomes of all members of that family.

(c) **Economic Family Income**

An economic family consists of all persons related by blood, marriage or adoption and living in the same household. The total income of an economic family is the sum of the total incomes of all members of that family.

(c) **Household Income**

A household consists of all persons, irrespective of their interrelationship, living in a dwelling. The total income of a household is the sum of the total incomes of all members of that household.

(d) **Income Status**

This variable indicates the status of a family unit in relation to Statistics Canada's low income cut-offs (LICOs), that is, whether the total income of a family unit is above or below the applicable cut-off point. Statistics Canada introduced these low income cut-offs in 1968 based on 1961 Census income data and on 1959 family expenditure patterns. The expenditure data indicated that, on average, Canadian families spent about 50% of their income on food, shelter and clothing (components of expenditure that fit broadly into the "basic necessities" category). It was arbitrarily assumed that a family which had to spend 70% or more of its income on these basic essentials would be left with very little discretionary income and would, therefore, be in "straightened circumstances". With this assumption, low income cut-off points were set for seven different sizes of families.

The national family expenditure data for 1978 indicated that Canadian families spent, on average, about 38.5% of their income on food, shelter and

clothing (compared with 42% in 1969 and 50% in 1959). A major reason for these reductions was the substantial increase in real incomes during the intervening period. By maintaining the postulated 20 percentage point difference in average expenditure as a proportion of income between what low income and all families spend on food, shelter and clothing, the revised low income cut-offs were determined at income levels (differentiated by family size and degree of urbanization) where, on average, 58.5% of income was spent on food, shelter and clothing.

Since the revision based on the 1978 family expenditure data, the low income cut-offs have been updated every year by changes in the Consumer Price Index. Table 1 provides the matrix showing the 1985 cut-offs.

Table 1
Low Income Cut-offs of Family Units, 1985

Size of family	Size of area of residence				
	500,000 and over	100,000 499,999	30,000 99,999	Small urban regions	Rural areas
1985 dollars					
1 person	10,233	9,719	9,117	8,429	7,568
2 persons	13,501	12,815	11,956	11,093	9,891
3 persons	18,061	17,115	15,996	14,880	13,244
4 persons	20,812	19,779	18,490	17,200	15,310
5 persons	24,252	22,963	21,415	19,952	17,803
6 persons	26,488	25,026	23,393	21,758	19,436
7 or more persons	29,155	27,606	25,801	23,994	21,415

Users should to note several points:

- (i) Given the widespread misunderstanding concerning the nature of the cut-offs, it is useful to spell out unambiguously what they are and what they are not. As will be apparent from the above brief description, the cut-offs are not poverty lines and should not be so interpreted. The setting of poverty lines necessarily involves a value judgement as to the level of minimum income below which an individual or family would generally be regarded as "poor". No such judgement has been attempted in constructing the low income cut-offs.

Rather, these cut-offs were designed in response to the need to quantify the numbers and characteristics of individuals and families falling into the lowest income category - defined in relative terms taking into account current overall levels of living. The low income cut-offs do not take into account a number of important factors such as wealth (e.g., home ownership and mortgage indebtedness), access to subsidized goods and services, future earnings potential, etc., and as a result, while many individuals or families falling below the cut-offs would be considered in "poverty" by almost any Canadian standard, others would be deemed by most to be in quite comfortable circumstances.

- (ii) The concept of LICOs applies to economic families and unattached individuals. However, since all members of an economic family share a common income status, it is possible to produce low income statistics on the "population in private households".
- (iii) Annual low income statistics are published from the data collected in the Survey of Consumer Finances. It may be pointed out that the Census and the Survey differ slightly when applying the "Size of Area" or "Degree of Urbanization" classification to derive incidence of low income. Census takes into account the density of population to designate an enumeration area as urban and the total population of contiguous urban EAs determines the size of area. The survey takes complete CMAs or CAs and classifies these into size of area by total population within the CMA/CA boundaries. The overall impact of this difference is negligible.
- (iv) The low income cut-offs are based on certain expenditure-income patterns which were not available from survey data for the entire population. For this reason, the population resident in the Yukon and Northwest Territories and Indian Reserves are excluded.

To summarize, Statistics Canada's low income cut-offs identify the lowest income groups taking into account family size and area of residence classification.

(Statistics Canada is currently in the process of concluding an overall review of the low income cut-offs and the methodology underlying them. See Statistics Canada's Low Income Cut-Offs, Methodological Concerns and Possibilities: A Discussion Paper, by M.C. Wolfson and J.M. Evans, Analytical Studies Branch, Statistics Canada, December 1989).

4. RELATED VARIABLES

The census data base allows users to cross-classify, in great detail but within reason, a host of population characteristics including income. Some of the important variables related to, or used with, income are included (and defined) in the statistical data released in Census income publications. For ease of reference, the more important census variables related to income are listed below. For definitions, users should consult the 1986 Census Dictionary, relevant Census Guides and other documents.

(a) **Demographic Variables**

These include such basic variables as age, sex, marital status, family relationship, etc.

(b) **Ethno-cultural Variables**

These include mother tongue, official language, ethnic origin, immigration and citizenship, etc.

(c) **Economic Variables**

These include education, weeks worked, class of worker, occupation, etc.

(d) **Family/Household Variables**

Census data can be produced for individuals, families or households. When income is being analyzed at the family or household level, it is possible to relate it to individual characteristics by specifying a particular individual in the family (e.g. wife) or household (e.g. the first person). Family and household variables, often used in conjunction with income include number of persons, number of children (of various ages) number of earners or income recipients, family structure, household type, family or household composition, etc.

5. MOST USED INCOME STATISTICS

Users of census income and other data have, to a large extent, total flexibility to define the statistics required by them. The following are some of the statistics which are more commonly used.

(a) **Income Size Distributions**

The income variables carry the actual dollar values on the data base. It is, therefore, possible to classify the income units by income size groups. The number of feasible groups would depend on several factors. It should, however, be kept in mind that too detailed a distribution will be subject to large sample errors. It is often useful to obtain both numeric and percentage distributions.

(b) **Average Income**

Average income is defined as the weighted mean total income of a group and is calculated from unrounded data by dividing the aggregate income of the group by the number of units in that group.

While this is the standard definition of an average, it should be noted that **average income (total income or income from a component) of individuals is always derived by dividing the aggregate income by the number of income recipients 15 years and over.** The results of most analysis based on averages including individuals without income could be quite misleading.

On the other hand, **the average incomes of non-family persons, families and households are always calculated by dividing the aggregate by number of units whether or not they had any income.** Households, families and a non-family persons are always expected to have income during the reference period. However, there are some minor exceptions. It is possible for a family or a non-family person to have subsisted without income by reducing past savings or going into debt. In other cases, zero income situations result from changes in family composition, recent immigration, etc. Some of the families not reporting income may have either been newly formed or undergone a change in family composition through marriage, divorce or widowhood. Most of the families with female reference persons without income may fall into this category. The majority of other families without any income may in fact be families who recently migrated to Canada and were instructed not to report incomes from non-Canadian sources. Similar reasons apply to most of the non-family persons not reporting income. On the whole, the number such cases of zero income is extremely small.

(c) **Standard Error of Average Income**

Users may wish to obtain standard errors for the average incomes produced for them. This statistic is an estimate of the error introduced into these data by the fact that they are collected only from a one in five random sample of

households. There is a 95% probability that the true average income of a group (the value that would have been obtained had sampling not been used) lies within plus or minus two standard errors and it is 99% that the true average lies within plus or minus three standard errors. The estimated standard error does not include the effects of certain types of response error or systematic or coverage errors.

(d) Median income

Median income of a specified group is defined as that amount which divides its income size distribution into two halves, that is, the incomes of the first half are below the median, while those of the second half are above the median. The organization of the Census data base is such that it does not lend itself to easy calculation of true medians. All the published medians have been derived from grouped data.

(e) Incidence and Composition

The presence of actual dollars allows users to produce aggregate amounts of income from various sources which, in turn, can be used to obtain and analyze the income composition of various groups. Similarly, it is possible to generate from the Census data base the incidence of various sources of income among individuals, families and households.

(f) Major source of income

It is possible to obtain a distribution of individuals, families or households by their major source of income. This variable is an indicator of the income component which constitutes the largest proportion of the total income of an income unit. Various combinations of income sources can be used to derive this classification. For example, at the most detailed level, the income sources can be combined into five components as follows: wages and salaries, self-employment (non-farm and farm) income, government transfer payments, investment income and other income (retirement pensions and other money income). The absolute values for these components are compared and the component with the largest absolute value is designated as the major source of income.

IV. COLLECTION AND COVERAGE

1. INCOME QUESTIONNAIRE

The resources spent on a modern census are so large that, to ensure maximum benefit out of the huge investment, a census usually collects more than the basic demographic data. At the same time, governments are sensitive to the issue of response burden. Canada, like some other countries, has adopted an approach which attempts to meet the dual objective of efficient use of resources and lower response burden.

This approach consists of making use of two basic forms to collect information, a short form (2A) and a long form (2B). The short form contains the questions on age, sex, marital status, family relationship, aboriginal status and home ownership. The answers to these questions provide the basic data on the human and housing stock of the nation. In 1986, four out of five households in Canada received this short questionnaire.

The long form, in addition to the basic questions on the short form, asks questions on ethnic origin, immigration, education, language, mobility, labour force activity, industry, occupation and income. Thus, the answers to these questions provide a social and economic portrait of Canada at the time of the census. This long form was distributed to a 20 percent sample, or one in five households in 1986.

The income question was the last question on the long form (2B). It consisted of ten questions on sources of income and a question on total income. Each question was addressed to individuals 15 years and over in the sampled households. The respondents were asked to provide an amount against the sources from which they received an income during the calendar year 1985. Variations of 2B form (Forms 2C and 3) were used for certain segments of population. However, it is sufficient to know that the income questions on these forms were identical to those on the 2B questionnaire.

A facsimile of the 1986 income questionnaire is reproduced in Figure 2.

Although there are ten sources of income listed on the questionnaire, it is important to advise the respondents about the components of each source. To this end, a Respondent's Guide is produced explaining each question on Form 2B. This Guide is included in the drop-off package for each household in the sample. The portion of the Respondent's Guide dealing with income questions is reproduced in Figure 3.

FIGURE 2. 1986 CENSUS: INCOME QUESTIONS

32. During the year ending December 31, 1985, did you receive any income or suffer any loss from the sources listed below?

- If yes, please mark the "Yes" box and enter the amount; in case of a loss, also mark the "Loss" box.
- If no, please mark the "No" box and proceed to the next source.
- Do not include family allowances and child tax credits.
- Please consult the Guide for details.

AMOUNT

		Dollars	Cents
(a) Total wage and salaries including commissions, bonuses, tips, etc., before any deductions	19 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	<input type="text"/>
(b) Net non-farm self-employment income (gross receipts minus expenses) from unincorporated business, professional practice, etc., on own account or in partnership	21 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	22 <input type="checkbox"/> Loss
(c) Net farm self-employment income (gross receipts minus expenses) from agricultural operations on own account or in partnership	24 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	25 <input type="checkbox"/> Loss
(d) Old age security pension and guaranteed income supplement from federal government only (provincial income supplements should be reported in (g))	27 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
(e) Benefits from Canada or Quebec Pension Plan	29 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
(f) Benefits from Unemployment Insurance (total benefits before tax deductions)	31 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
(g) Other income from government sources including provincial income supplements and grants and social assistance, e.g., veterans' pensions, workers' compensation, welfare payments (do not include family allowances and child tax credits) (See Guide)	33 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
(h) Dividends and interest on bonds, deposits and savings certificates, and other investment income, e.g., net rents from real estate, interest from mortgages	35 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	36 <input type="checkbox"/> Loss
(i) Retirement pensions, superannuation and annuities	38 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
(j) Other money income, e.g., alimony, scholarships	40 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	
(k) Total income from all of the above sources	42 <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>	43 <input type="checkbox"/> Loss

FIGURE 3. 1986 CENSUS RESPONDENT'S GUIDE: INCOME QUESTIONS

Question 32

Please note these important points

- Information on your census questionnaire is strictly confidential by law and no individual, government department or agency outside of Statistics Canada has access to it. The Statistics Act prohibits the disclosure by Statistics Canada of any information that can be related to any identifiable individual person.
- Answer every part of this question whether you were working or not. Income reported should be the total money income received during the calendar year 1985. If you had no income from any of the listed sources, mark "No". In case of a loss, report the amount and also mark "Loss".
- If you are not sure of an answer, consult the relevant documents, e.g., income tax returns. Otherwise make your best estimate.
- If you received income from abroad, report it in Canadian dollars. However, if you immigrated to Canada after January 1, 1985, do not report income received before your arrival in Canada.
- Do not report either the family allowances received from the Federal and Provincial Governments or the child tax credits. These allowances and credits will be estimated for each family from the number of children shown on this questionnaire.
- Also excluded from income are gambling gains and losses, lottery prizes, money inherited during the year in a lump sum, capital gains or losses, receipts from the sale of property, income tax refunds, loan payments received, lump-sum settlements of insurance policies, rebates received on property taxes, and refunds of pension contributions.

Part (a): Total Wages and Salaries. Report total wages and salaries from all jobs before deductions for income tax, pensions, hospital insurance, etc. (Do not report take-home pay.)

Include military pay and allowances.

Include tips and cash bonuses received during 1985. Also include all types of casual earnings whether or not T4 slips for income tax have been issued.

Commissions should also be included. However, salesmen who worked for more than one company, or who maintained their own office or staff, should report in "non-farm self-employment" part (b). Also persons baby-sitting in their own homes and newspaper boys/girls should report in part (b).

Do not include the value of taxable allowances and benefits provided by employers, such as free lodging, free automobile use, bursaries, travelling expenses of spouse, contributions towards medical insurance, etc.

If consulting T4 slips to answer this question, report income shown in Box C of T4 Federal Income Tax slips less the value of "taxable allowances and benefits" shown in Boxes K to O.

Owners of an unincorporated business or farm should report all the income from that business or farm as self-employment in part (b) or (c).

Part (b): Net Non-farm Self-employment Income. Report an amount if you owned and operated a non-farm, unincorporated business or professional practice during 1985, whether by yourself or in partnership. In case of a partnership, report only your share of the net income. Receipts from incorporated businesses should be reported in "wages" and/or "investment income".

Report net income (gross receipts minus expenses of operation such as wages, rents, depreciation, etc.). Do not subtract personal deductions such as income tax and pensions.

Persons baby-sitting in their own homes, operators of direct distributorships such as selling and delivering cosmetics, newspapers, etc., and odd jobbers who obtained by themselves contracts or agreements to do jobs should report their income in this part.

Artists, writers, music teachers, hairdressers, dressmakers, etc. should report their net income from free-lance activities.

In case of a loss, report the amount and also mark "Loss".

Part (c): Net Farm Self-employment Income. Report an amount only if you operated a farm in 1985 by yourself or in partnership. In case of a partnership, report only your share of net income.

Report your net income (gross receipts from farm sales minus depreciation and cost of operation). Cash advances should be included in gross receipts for the year in which they are received. Include also government supplementary payments. Exclude the value of income "in kind", such as agricultural products produced and consumed on the farm.

Answer the question even if you employed a hired manager to run your farm and deduct the manager's salary as expenses. If you rent out your farm, report the net rent in "investment income", part (h). Similarly, income from incorporated farms should be reported in "wages" and/or "investment income".

In case of a loss, report the amount and also mark "Loss".

Agricultural operations include production of field crops, vegetables, fruits, greenhouse and nursery products and seeds, maple products, raising poultry and livestock, production of animal products such as eggs, milk and wool, and fur farming and beekeeping.

Part (d): Old Age Security Pension and Guaranteed Income Supplement. Report payments to persons 65 years and over and to 60 to 64-year-old spouses/widows of Old Age Security Pension recipients (Spouse's Allowance) from federal government only.

Provincial income supplements are to be reported in part (g). Retirement pensions of civil servants, RCMP and military personnel are to be reported in part (i). Old age, retirement and war pensions and other similar payments received from foreign governments in 1985 should be reported in (j).

Part (e): Benefits from Canada or Quebec Pension Plan. Report benefits received under the Canada or Quebec Pension Plan, e.g., retirement pensions, survivors' benefits, disability pensions.

Please do not report your contributions to the Plan but the benefits from it.

Do not include lump-sum death benefits.

Retirement pensions of civil servants, RCMP and military personnel are to be reported in part (i).

Part (f): Benefits from Unemployment Insurance. Report total unemployment insurance benefits, before income tax deductions. Include benefits for sickness, maternity, fishing, work sharing, retraining and retirement received under the Federal Unemployment Insurance program.

Part (g): Other Income from Government Sources Including Provincial Income Supplements and Grants and Social Assistance. Report payments received from provincial or municipal programs by persons in need, including mothers with dependent children, persons temporarily or permanently unable to work, elderly individuals, the blind and the disabled. Include cash benefits covering basic needs (e.g., food, fuel, shelter, clothing) plus cash benefits for special needs.

Include provincial income supplements, i.e. provincial payments to seniors to supplement Old Age Security and Guaranteed Income Supplement.

Include provincial payments to seniors to help offset accommodation costs.

Include here all other transfer payments such as for training under the National Training Program (NTP), veterans' pensions, war veterans' allowance, pensions to widows and dependants of veterans, workers' compensation, etc.

Include, if applicable, provincial tax credits and allowances such as "Nova Scotia Tax Credits", "New Brunswick Tax Credits", "Quebec Real Estate Tax Refund", "Allowances for Children Under Age 6", "Ontario Tax Credits", "Manitoba Tax Credits", "Alberta Royalty Tax Credits", "Alberta Tax Credits", "British Columbia Tax Credits" and "Yukon Territory Tax Credits" as claimed on your income tax return.

Do not include family allowances and federal child tax credits.

Retirement pensions to career military personnel, civil servants, etc., are to be reported in part (i).

Part (h): Dividends and Interest on Bonds, Deposits and Savings Certificates, and Other Investment Income. Report actual amount of dividends received, not the taxable amount for dividends received from Canadian corporate stocks.

Also report here dividends received from foreign stocks.

Report interest from deposits in banks, trust companies, co-operatives, credit unions, caisses populaires, etc., as well as interest on savings certificates, bonds and debentures.

Also report here net rents from real estate (including farm land), mortgage and loan interest received, regular income from an estate or trust fund, and interest from insurance policies.

Also include investment income received from abroad.

If this total is a loss, write the amount and also mark "Loss".

Part (i): Retirement Pensions, Superannuation and Annuities. Report income received as the result of having been a member of a pension plan of one or more employers; payments received from all annuities, including payments from a matured registered retirement savings plan (RRSP) in the form of a life annuity, a fixed term annuity, a registered retirement income fund or an income-averaging annuity contract; pensions paid to widows or other relatives of deceased pensioners; pensions of retired civil servants, Armed Forces personnel and RCMP officers; annuity payments received from Canadian Government Annuities Fund, an insurance company, etc.

Do not include lump-sum death benefits, lump-sum benefits and withdrawals from a pension plan or RRSP or refunds of overcontributions. Severance pay and retirement allowances and pensions from outside Canada should be entered in Question 32(j).

Part (j): Other Money Income. Include here all other regular cash income not covered in the questions above.

Examples are:

- alimony;
- child support;
- periodic support from persons not in the household;
- net income from roomers and boarders;
- income from abroad (e.g., pensions) except dividends and interest which should go into (h);
- non-refundable scholarships and bursaries;
- severance pay;
- royalties;
- strike pay.

Do not include:

- family allowances and federal child tax credits;
- cash refunds of pension fund contributions;
- lump-sum death benefits or any other one time lump-sum payment.

Income provides important information on the economic well-being of Canadians and is essential in measuring the welfare of the elderly, single parents, ethnic minorities and the community as a whole. Various government income support programs are based on these data. Income data are also used extensively by businesses in marketing products, locating retail outlets and selecting which new consumer goods to produce.

2. COVERAGE AND COLLECTION

The information on the long form, including income information, was to be collected from a 20 percent sample of all households. However, the sampling rule was not applied in certain cases. Information was collected on a 100 percent basis from households in Northern and Remote areas, on Indian Reserves, and from persons living abroad attached to the Canadian Armed Forces or with the Federal or Provincial governments.

Two methods of collection were used. In all urban areas, the forms were delivered to the sampled households by trained census representatives prior to the Census day (June 3, 1986) with instructions to return the completed questionnaires by mail. In rural areas, a canvasser methodology was used and the completed questionnaires were picked up by the census representative.

In the 1986 Census, income information was not collected from individuals under 15 years of age, institutional residents and recent immigrants who entered Canada between January 1 and June 3, 1986.

All questionnaires, once received by the field staff, were checked for completion. In case of non-response to the entire questionnaire or to designated mandatory questions, the census representative went back to the household to obtain the needed information. The question on sources of income was designated a mandatory question in the 1986 Census. Once each census representative had completed their field edit and follow-up for all the households in their assigned areas, the questionnaires were forwarded to one of the regional offices for further processing.

V. REGIONAL AND HEAD OFFICE PROCESSING

1. REGIONAL OFFICE PROCESSING

Statistics Canada has several regional offices, which become collection and processing centres for the Census. During the regional office processing the questionnaires went through a grooming procedure which prepared the documents for key entry on to data tapes. In the case of income, detailed instructions were given to take the following actions:

- (a) the removal of cents;
- (b) the conversion of non-annual values (for example, per month) into their annual amounts;
- (c) the conversion of values reported in foreign currencies to Canadian dollar equivalents;
- (d) the resolution of multiple amounts reported against a single source; and
- (e) the elimination of all illegible and non-numeric values.

If a problem was not covered by the specified procedures, the regional office sought the advice of subject matter specialists. The problem was described by the regional staff through a "technical assistance request form (TARF)". TARFs were faxed to head office and the problems were generally resolved the same day. In 1986, only 79 TARFs were raised on income questions, most of which sought clarification of written responses.

Once the questionnaires had been groomed, the income and other information was key entered on to computer tapes which were then transferred to head office in Ottawa for further processing.

2. HEAD OFFICE PROCESSING

The procedures to process most of the information provided by the respondents are automated with very little manual intervention. In the case of income, however, certain errors, if left uncorrected could lead to distortions which could have serious repercussions on the quality and credibility of census income data. For example, a respondent-provided amounts of \$90,000 in wages and salaries or \$9,000 in unemployment insurance benefits could be entered erroneously with an additional zero. A few errors of this magnitude in the first source could quickly add millions of dollars to wage estimates, while similar errors in the second source could lead to ridiculous estimates.

To safeguard against such errors, all amount entries were checked against specified limits, e.g. \$150,000 for wages and salaries, \$15,000 for unemployment insurance benefits, and so on.

All records were subjected to this edit. If an amount reported was in excess of the limits for a particular source, the relevant questionnaire was identified, examined and the information corrected on the data base where necessary.

Table 2 shows the upper and lower limits for specified for various sources and the number of amounts reported and fell out of limits. There were about 8.2 million amount entries of which about 73,000, or .9%, were manually examined. About 34,000 source amounts were modified. Most of these adjustments were to transfer payment sources as a result of respondents reporting multiple source receipts against a single income source on the questionnaire.

Respondents reporting amounts for Old Age Security pension and Guaranteed Income Supplement (OAS/GIS) in excess of their 1985 entitlement caused the most common error. This over-reporting was often due to one of the following reasons:

- OAS/GIS changes every quarter. In some cases, the current OAS/GIS payment was multiplied by 12 to arrive at the annual amount;
- OAS/GIS pension was combined with Canada/Quebec Pension Plan (C/QPP) benefits;
- OAS/GIS pension was combined with provincial income supplements;

Table 2
Income Outliers (Sample Counts), 1986 Census

Source of income	Limits		Responses with amount	Outside limit		Changed	
	Upper	Lower		number	%	number	%
	\$	\$					
Wages and salaries	100,000	-	2,265,469	12,345	0.5	1,988	0.1
Non-farm self-emp.	75,000	- 30,000	134,753	5,708	4.2	714	0.5
Farm self-employment	75,000	- 20,000	69,222	1,998	2.9	337	0.5
OAS and GIS	8,500	-	430,421	6,704	1.6	9,654	2.2
CPP and QPP	7,000	-	349,937	7,275	2.1	7,973	2.3
UIC benefits	13,000	-	400,286	1,099	0.3	1,141	0.3
Other govt. transfers	17,000	-	334,795	4,428	1.3	5,250	1.6
Investment income	50,000	-10,000	956,104	7,301	0.8	846	0.1
Retirement pensions	30,000	-	219,342	4,548	2.1	1,095	0.5
Other money income	20,000	-	123,448	3,184	2.6	931	0.8
Total income	100,000	-30,000	2,898,138	17,958	0.6	3,587	0.1
TOTAL AMOUNT RESPONSES			8,181,915	72,548	0.9	33,516	0.4

- One spouse reported OAS/GIS for both spouses;
- some individuals, who turned 65 in the later part of 1984, might have received and reported some arrears related to 1984;
- some individuals, under the age of 60, misreported another transfer payment or a retirement pension in this source.

All cases of reporting of over \$8,500 as OAS/GIS were dealt with during Head Office Processing.

Upon completion of the updates and corrections required in this processing phase, the data was then transferred to the next phase in processing, namely, edit and imputation processing.

VI. EDIT AND IMPUTATION

The data tapes from the Head Office Processing were passed through an automatic processing system referred to as edit and imputation. During this phase of income processing, it was assumed that most respondents complete their census questionnaires including income questions as accurately as possible. This assumption stems partly from Statistics Canada's philosophy of trust in respondents and partly from the nature of census income data. Although there are known relationships between income and some other census variables, these are not simple linear relationships. Furthermore, the time lag between some of these variables (e.g. current occupation or class of worker in June 1986 and income in 1985) does not allow verification of some of the apparent inconsistencies.

1. OVERVIEW

This phase of income processing consisted of a system which edited the reported values for selected income sources against specified criteria, checked for reasonable consistency, on the one hand, among income sources and, on the other, between income and other variables, imputed for non-response from an established pool of donor records and, finally, derived new income variables.

This system consists of a set of highly complex and technical operations. The description in this Section has been kept, as much as possible, both brief and non-technical. The order in which the various operations are described has been adopted for ease of reference and does not follow the actual system. Users interested in greater detail may refer to other documents or get in touch with the subject matter experts in Statistics Canada.

In very broad terms, the entire process consists of the following parts:

(a) Determination of Income Processing Universe

As previously mentioned, no income data was requested from individuals aged less than 15 years, from persons who immigrated to Canada in 1986 or from residents of institutions. For these individuals, any reported income was removed and all sources and total income were set to zero. The income reported by members of Hutterite colonies was also removed because of the known inconsistencies of reporting of income among these colonies. Thus, having zeroed out any income reported by the individuals described, they were excluded from further processing. The remainder records went through the processing stream for income.

(b) Determination of Response to Income Sources

The response status of total income and of each of the sources listed on the questionnaire was classified into five categories.

(c) Determination of Response to Income Questionnaire

The response status of each income record as a whole was determined by examining the information provided in total income, income sources and certain related variables. All records were classified into ten categories.

(d) Edit and Assignment of Sources

Information provided against the ten income sources listed on the 1986 Census questionnaire was edited for consistency and correction or assignment where necessary.

(e) Assignment for Non-response

All records were stratified on the basis of certain important income-related characteristics and divided into donors and recipients according to their response status. Complete and partial non-response were dealt with separately.

(f) Derivation of Final Variables

Once the reported income sources were finalized through edits and assignments, family allowances and child tax credits were estimated and assigned. Total income of each individual was then calculated as a sum of the amounts in its constituent sources and other related income variables were derived.

2. EDIT AND ASSIGNMENT OF INDIVIDUAL SOURCES

Many respondents leave an income source blank if they consider the source is inapplicable to them. For example, young respondents tend to leave sources on retirement pensions (public or private) blank. As a first step, therefore, the responses to individual income sources on the questionnaire were examined in combination with the response to total income and each income source was placed in one of the following four categories:

AMOUNT - Reported an amount (negative in some cases).

PARTIAL - Indicated receipt of income without providing an amount.

ZERO - Gave a clear indication of no income from the source.

BLANK - Left the source blank.

Derived in the above manner, the response rates to the individual sources, other than wages and salaries, ranged from 81% to 84%. In the case of wages and salaries, 92% of the individuals in the edit universe had responded to the question.

Since there is a wide variance in the incomes reported by individuals with similar characteristics, editing of most income sources against pre-specified "standards" is not possible. For these reasons, individual sources were edited only for obvious inconsistencies. However, the amounts reported against various sources of government transfer payments were compared with the existing administrative standards and adjustments were made where necessary. These edits of sources were undertaken initially and were repeated after imputation for non-response had been completed to guard against any inconsistencies as a result of imputation.

(a) Total Income

The information provided by respondents against this item was used as a control during most of the automated processing of income data. The amounts reported as total income were edited in conjunction with the responses provided to the sources of income as follows:

- (i) In all cases where respondent provided amounts for total income and one or more sources of income, the system compared the sum of reported sources and total income. Nearly nine out ten individuals who reported an amount against total income also provided an amount response to one or more sources of income and there was no difference between their sum of sources and total income. Because of the non-capture of reported cents, a difference of plus or minus \$10 was ignored and their reported total income was replaced by the derived sum of sources.
- (ii) If the difference between the sum of their reported sources and their total income was greater than ten dollars, an edit was undertaken to check if the difference equalled their reported wages or income from non-farm self-employment. (Some respondents tend to report their

"gross" earnings in wages and "net earnings" in self-employment). If so, one of the components was removed.

- (iii) In cases where the sum of sources was less than the reported total income, it was assumed that the respondent had missed reporting at least one source of income. Where negative income was reported against one of the sources, the reported total income was replaced by the derived sum of sources, keeping in view the possibility of errors of addition in such cases. The remaining records in this group were separated for assignment of missing sources.
- (iv) For all other cases where the respondents reported their total income, they only partially answered against income sources or left them blank. Where only one source was partially responded to or left blank, the reported total income was assigned to the single indicated source. The edit, however, ensured that excessive values were not assigned to government transfer payment sources or that negative total income values were only assigned to a source in which a loss could have incurred. The remaining records in this group were earmarked for assignment of source data.

Whenever an amount was changed in one of the sources during edit and imputation, the total income field was automatically adjusted.

(b) Wages and Salaries

This is the most important source of income in terms of both incidence and share of total income. Except for two checks, the reported amounts were accepted. First, as already stated above, a check for duplicate reporting of wages and non-farm self-employment income was undertaken, which might have led to the deletion of wages and salaries in certain cases. Secondly, in cases of obvious misreporting of non-farm self-employment income against wages, the amount was transferred from the former to the latter source without affecting reported total income.

(c) Net Non-Farm Self-Employment Income

Other than the impact of editing of total income and wages and salaries, as explained above, no other changes were made to this source during editing.

(d) Old Age Security Pension and Guaranteed Income Supplement

As explained earlier, the Head Office Processing dealt with all cases where the reported amount for Old Age Security pension and Guaranteed Income Supplement exceeded \$8,500. The edit and imputation system processed only those records which showed under-reporting or non-reporting by those entitled to these payments. Furthermore, an analysis of inconsistencies indicated that editing of this field often involved changes to Canada/Quebec Pension Plan benefits and other government transfer payments.

To begin with, the existing amounts in this field were edited, and changed where necessary, as follows:

- (i) If the reported amount equalled 12 times the current monthly (June, 1986) entitlement, it was changed to actual 1985 entitlement.
- (ii) If the reported amount exceeded the actual OAS/GIS entitlement, the excess was transferred, as appropriate, to either provincial income supplement or C/QPP or both.
- (iii) If a respondent reported OAS/GIS but did not meet the age, marital status and residence requirements, the reported amount was transferred to C/QPP benefits if the respondent was eligible for such benefits. Otherwise, the amount was transferred to other government transfer payments.
- (iv) If the editing of C/QPP benefits clearly indicated that a respondent reported the OAS/GIS against that source, it was transferred to OAS/GIS.

Once all sources had been edited and assignment for non-response made, the entire file was passed through a routine to ensure that Old Age Security pension or Guaranteed Income Supplement, was not assigned to an ineligible individual. Furthermore, while all persons aged 65 years and over in 1985 were entitled to Old Age Security (OAS), the entitlement to Guaranteed Income Supplement (GIS) was dependent on the respondent's income from other sources in the previous year. In the case of married couples, the amount of GIS depended on the combined income of husband and wife. Also, 60-64-year old spouses of OAS recipients were entitled to a Spouses Allowance (SPA). Finally, individuals not born in Canada had to fulfil certain residence requirements before becoming entitled OAS/GIS.

To meet these various conditions, a relatively complex system, which took into account age, immigration status, family status, individual/spousal income, was developed and, on the basis of 1985 administrative entitlements, an OAS/GIS/SPA entitlement was calculated for each individual. If the respondent reported more than this estimated entitlement against OAS/GIS, no action was taken. In all other cases, the calculated amount replaced the existing amount against OAS/GIS.

(e) Canada/Quebec Pension Plan Benefits

There is a wide variety of both the types of C/QPP benefits and recipients, which makes it difficult to do a consistency edit of this source. The benefits stem from the contributions, calculated as a percentage of earnings, made by employed persons during their working lives. In some cases, respondents reported their C/QPP "contributions" rather than their benefits in this source. Where this was so established, the amount was deleted. Furthermore, as already explained, where respondents, over the age of 65 in 1985, reported their exact OAS/GIS entitlement against these benefits and reported zero OAS/GIS, the amount was transferred to OAS/GIS. Similarly, reported amounts against this source by other elderly respondents who were not considered eligible for these benefits were transferred to OAS/GIS to the extent of their entitlement and any excess to Other Government Income.

(f) Unemployment Insurance Benefits

Some respondents erroneously reported their unemployment insurance contributions rather than their benefits. These were removed in a manner similar to the misreported contributions to C/QPP.

(g) Family Allowances

Although family allowances and child tax credits are included in the Census income concept, no information on these was collected from respondents. Instead, family allowances were calculated on the basis of the number of eligible children in the family and federal-provincial rates and were assigned to the parent with the higher total income in 1985 (or to the lone parent).

(h) Federal Child Tax Credits

Since payment of federal child tax credits is dependent on parental "net income", a complex formula based on income tax statistics was used to derive net income. The federal child tax credits were then calculated on the basis of the number of eligible children in the family and the derived parental net

income, and were assigned to the parent with the higher total income in 1985 (or to the lone parent).

(i) Other Income from Government Sources

This source of income consists of all transfer payments other than those listed above, received from federal, provincial or municipal governments in 1985, and is prone to under-reporting. Because of the large number of programmes involved and the criteria for their applicability, it is impossible to undertake a thorough edit of this component.

In 1985, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, the Yukon and the Northwest Territories provided benefits to OAS/GIS recipients. These provincial income supplements were estimated for each individual based on the diverse eligibility rules used by each province. If the reported income in other income from government sources was higher than the calculated supplement, no action was taken. In all other cases, the calculated entitlement replaced the reported value.

(j) Net Farm Self-employment Incomes, Investment Income, Retirement Pensions and Other Money Income

Other than the impact of editing of total income, no specific edit for these sources was undertaken.

3. IMPUTATION FOR NON-RESPONSE

To provide for the missing income data, three steps were undertaken. First, all individuals were given a record response code according to the type of their response to income questions. Secondly, all records were divided into donors (respondents) and recipients (non-respondents) and were, at the same time, classified into a set of homogenous strata. Finally, donors and recipients were matched to obtain missing income data.

(a) Record Response Code

All individuals were divided into ten groups with each given a record response code as follows:

RC1 - These records had no income and were not used as donors for the imputation of data to non-respondents.

RC2 - These were respondent records (with zero income) and were part of the donor universe along with income recipients for non-respondent records whose income status could not be determined (see RC5 below).

RC3 - These were respondent records (with income) and were part of the donor universe for non-respondent records coded RC5 and were the entire donor universe for non-respondent records coded RC6 to RC99.

RC4 - These were respondent records (with income) but were not used as donors.

RC5 - These were non-respondent records who may or may not have had income in 1985. These records were assigned complete income data from RC2 and RC3.

RC6 - These were non-respondent records who received an unknown income in 1985. These records were assigned complete income data from RC3 records.

RC7 - These records provided an amount for their total income only. These records were matched with an RC3 record with similar total income for complete assignment of income data.

RC8 - These records provided an amount in total income as well as in some sources but, at the same time, did not respond to some of the sources. A procedure similar to records coded RC7 was adopted except that the recipient was assigned data for only those sources which were "partial" or "blank". In other words, an amount already reported against a source was not replaced.

RC9 - These records were similar to RC8 except that information was provided for employment income sources only but not on total income. These records were treated in the same manner as those coded RC8 except that the matching of non-respondents was undertaken on the basis of reported employment, rather than total, income.

RC99 - These records were without an amount reported in either the three employment income sources or the total income. These were treated in a manner similar to RC6 except that the recipient was assigned data for only those sources which were "partial" or "blank".

Derived in the above manner, about 87% of all individuals who should have responded to income questions provided complete information, 4% provided only partial information and 9% were completely non-respondent. Table 3 gives a breakdown by Record Response Codes.

Table 3
Distribution of Population 15 years and over by Type of Response to Income, 1986 Census

Record response code	Type of Response	Response rate
		%
	Respondents	86.8
RC1-2	Without income	13.4
RC3-4	With income	73.4
	Partial respondents	4.0
RC7	Only total income reported, no information on sources	2.4
RC8	Total income reported and sources indicated without amount	0.9
RC9	Employment income reported but total income not reported	0.7
	Non-respondents	9.2
RC5	Indeterminate, no information provided	6.8
RC6	With income, no other information	0.8
RC99	With income, sources indicated without amount	1.6
	TOTAL	100.0

(b) Stratification

The income of a non-respondent retired person is, other things being equal, likely to be similar to another retired person. Again, two persons aged between 30 to 35 years, with university degrees and working full year full time in 1985 are likely to have similar incomes. It is, therefore, logical to match non-respondents (recipients) and respondents (donors) with as many common characteristics as possible.

Partial respondents (records coded RC7, RC8 and RC9), where total or employment income was given but some source information was missing (and respondent records coded RC3) were divided into five strata: in Canada, non-aboriginal in urban or rural area, aboriginal on or off reserve, and outside Canada. Within each stratum, an attempt was made to further match the donor-recipient pair on the closeness of their given total or employment incomes (seven groups), age (three groups), work activity (worked or did not work in 1985) and class of worker paid worker/unpaid family worker, non farm self-employed or farm self employed).

For complete non-respondents, the operation was much more complex. Both respondents (records coded RC2 and RC3) and complete non-respondents (records coded RC5, RC6 and RC99) were divided into 67 homogeneous strata as follows:

- (i) The non-aboriginal population in Canada was stratified into 36 groups based on age (15-65 Years or 66 and over), work activity (weeks worked in 1985), class of worker (paid workers, non-farm self-employed, farm self-employed or unpaid family workers), economic family status (husband or lone parent, wife, other family member or unattached individual) and area of residence (urban or rural);
- (ii) The aboriginal population in Canada was stratified into 26 groups based on age (15-65 Years or 66 and over), work activity (weeks worked in 1985), class of worker (paid workers, self-employed, unpaid family workers), economic family status (husband or lone parent, wife, other family member or unattached individual) and reserve status (on or off reserve);
- (iii) The Canadians outside the country were stratified into 5 groups based on age (15-65 Years or 66 and over), work activity (worked or did not work in 1985) and economic family status (husband or lone parent, other family member or unattached individual).

To further improve the donor-recipient similarity, each of the 67 strata was divided into smaller groups on the basis of sex, age groups, education (with or without a university degree), occupation (above or below average income occupation) and full or part-time work.

(c) Imputation

Each non-respondent (recipient) was paired with a respondent (donor) within each stratum, also matching on the additional characteristics. If an exact match could not be found, then the additional matching constraints were relaxed but imputation was always carried out within the stratum. Once the best match for a recipient was found, the non-respondent was assigned the income sources and total income of the donor record. In the case of non-respondents who initially provided employment income sources, only missing source information was taken from the donor record.

In all cases of imputation, the processing system ensured that the donor and recipient records were located geographically as close as possible.

4. DERIVED VARIABLES

As a last step in the processing of income variables, a few variables, already defined in Section III.2, were derived. A few points need to be noted:

- (a) As stated earlier, the most important of these variables is, of course, "total income". In a few cases, the sum of positive and negative incomes from various sources amounted to zero. It was considered important to differentiate these cases from true zero income records. Accordingly, these records were assigned one dollar in their total income field.
- (b) It should be noted that the total income of census families, economic families and households is derived only for those in private households in Canada.
- (c) In addition to (b) above, the income status variable indicating the position of a unit in relation to low income cut-offs does not apply to the population in the Yukon, Northwest Territories and on Indian reserves.

5. IMPACT OF EDIT AND IMPUTATION

As stated at the outset of this Section, the objective of edit and imputation was not to "create" data but to ensure reasonable accuracy and consistency of the data supplied by the respondents. Keeping this objective in view during each of the many phases of edit and imputation, a record was kept of all changes made to the data. Table 4 gives

the original and the final number of income recipients and the amount received from income source.

Table 4

Impact of Edit and Imputation on the Number of Income Recipients and Their Aggregate Income (Sample Statistics), by Source of Income, 1986 Census

Source of income	Number of income recipients			Aggregate amount received		
	Original	Final	Change	Original	Final	Change
	'000		%	\$'000,000		%
Wages and salaries	2,239	2,526	12.8	41,791	46,101	10.3
Non-farm self-employment	133	178	33.7	1,978	3,007	52.0
Farm self-employment	69	76	12.4	511	580	13.4
OAS and GIS	427	468	9.5	1,655	2,303	39.1
CPP and QPP	346	377	9.1	940	1,022	8.7
UIC benefits	396	454	14.5	1,303	1,498	15.0
Family allowances	-	753	100.0	-	541	100.0
Child tax credits	-	505	100.0	-	308	100.0
Other govt. transfers	332	590	77.7	1,247	1,607	29.0
Investment income	949	1,069	12.6	3,627	4,051	11.7
Retirement pensions	218	243	11.5	1,577	1,749	11.0
Other money income	117	136	16.1	477	550	15.5
TOTAL INCOME	3,221	3,539	9.9	55,106	63,317	14.9

The table shows the impact of edit and imputation on both the number of recipients and aggregate income from each source. At the end of the process, the number of income recipients increased by 9.9%, while the aggregate amount of income increased by 14.9%. While the proportion of income assigned for most sources is commensurate with the proportion of records imputed, the following points should be kept in mind when examining data in Table 4:

- (a) The changes to non-farm self-employment income, showing in the table, include those resulting from the edit between class of worker and reported employment income sources, discussed earlier. Excluding this edit, the proportion of recipients with this source imputed was 11.5% and the corresponding imputed amount was 10.4%.

- (b) As was explained earlier, no information was collected on family allowances and child tax credits, both of which were estimated and assigned to those entitled.
- (c) The large proportion of individuals with other income from government sources assigned or imputed is largely due to the assignment of provincial income supplements to recipients of Old Age Security Pension and the Guaranteed Income Supplement. Since these imputed amounts were relatively small, the resulting proportion of aggregate income assigned was smaller than the proportion of recipients assigned.



VII. DATA EVALUATION AND QUALITY

Before data are released, an evaluation is undertaken with respect to their quality. In fact, however, the qualitative aspect of the data is kept in view throughout the processes described earlier in this document. Thus, the editing of amounts against maximum limits during Head Office Processing is carried out towards this end. (See Table 2). The first step in automatic processing is to determine the nature of response to income questions. (See Table 3). Again, during edit and imputation, audit trails are instituted to keep a record of changes made. (See Table 4).

Once the data have been finalized, an overall evaluation is undertaken before release. This evaluation consists of reconciliation of census income statistic with other sources of similar data. The results of two such reconciliations are summarized below.

1. CENSUS AND NATIONAL ACCOUNTS

The final estimates of 1985 income derived from the 1986 Census were evaluated against 1985 personal income estimates in the National Accounts. Before the evaluation, however, it was necessary to make adjustments for differences of concepts and coverage in the two sources. For example, Personal Income estimates are for actual wages received. The results of the evaluation are shown in Table 5.

The overall census estimates of aggregate income from comparable sources were just over 90% of similar National Accounts estimates. There was, however, substantial variation in the results of comparisons of individual sources.

The three components of employment income were smaller than the comparable estimates in the National Accounts. Census estimates of wages and salaries, the most important source of income, were smaller by 1.6%. Non-farm self-employment income and farm self-employment income were smaller, respectively, by 5.6% and 14.2%. On the whole, the estimates of employment income from the census were 98% of comparable National Accounts estimates.

Census estimates of Old Age Security Pensions and Family Allowances were also close to National Accounts estimates but the aggregates for Canada/Quebec Pension Plan benefits and other government transfer payments were underestimated to a larger degree. The "other government transfer payments" include a very large variety of transfer programmes and the adjustments made for conceptual equivalence were only approximate. Furthermore, a "catch-all" category like "other" is generally subject to under-estimation. Finally, estimates of investment income in the Census and the National Accounts show the largest difference. The underestimation in the Census (and the surveys) of this source of income is a common phenomenon in Canada and elsewhere.

Table 5
**Comparison Between Census Income Estimates and Adjusted Personal Income Estimates,
 Canada, 1985**

Source of income	Census income estimates	Personal income estimates	Difference	
			Absolute	Relative
	1	2	(1-2)	((1-2)/2)100
		(millions)		%
Wages and salaries	227,074.3	230,776.3	-3,702.0	- 1.6
Non-farm self-employment	14,961.9	15,846.1	-884.2	- 5.6
Farm self-employment	2,889.4	3,366.5	-477.1	-14.2
Investment income	20,496.9	36,929.0	-16,432.1	-44.5
OAS and GIS	10,992.8	11,172.6	-179.8	-1.6
C/QPP benefits	5,073.1	6,382.1	-1,309.0	-20.5
Family allowance	2,553.1	2,677.0	-123.9	- 4.6
UI benefits	7,211.4	10,169.0	-2,957.6	-29.1
Other gov't transfers	7,297.8	14,166.4	-6,868.6	-48.5
Employment income	244,925.6	249,988.9	- 5,063.3	- 2.0
Non-employment income	53,625.1	81,496.1	-27,871.0	-34.2
TOTAL INCOME	298,550.7	331,485.0	-32,934.3	- 9.9

Note: (1) Total income consists of comparable sources in the census and national accounts estimates; it excludes child tax credits, retirement pensions and other money income.

(2) Totals may not add due to rounding

2. CENSUS AND SURVEY OF CONSUMER FINANCES

Census income statistics were also compared with similar statistics from the Survey of Consumer Finances. An identical income concept is used in the Census and the Survey but there are differences of coverage. The Survey does not cover the population in the Yukon, Northwest Territories, Indian Reserves and outside Canada. Adjustments were made to the Census data for these differences before comparisons with the Survey data.

National and provincial income size distributions of different population groups such as individuals, families, etc were compared from the two sources. Similarly, the incidence low income among economic families and unattached individuals by difference characteristics was compared. The average incomes of individuals in each province, shown in Table 6, were also compared.

The results of these comparisons indicated a very good reconciliation between the Census and Survey income statistics.

Table 6
Percentage Distribution of Individuals 15 Years and Over, Income Recipients and Their Aggregate Income, and Their Average Income, by Province, Census and Survey of Consumer Finances, 1985

Province	<u>Population 15 years and over</u>		<u>Income Recipients</u>		<u>Aggregate income</u>		<u>Average income</u>	
	Census	Survey	Census	Survey	Census	Survey	Census	Survey
	%							
							\$	
Newfoundland	2.1	2.2	1.9	2.0	1.5	1.5	14,120	13,637
P.E.I.	0.5	0.5	0.5	0.5	0.4	0.4	13,591	13,051
Nova Scotia	3.4	3.4	3.3	3.3	2.9	3.0	15,821	15,779
New Brunswick	2.7	2.8	2.7	2.7	2.1	2.2	14,799	14,685
Quebec	26.2	26.3	25.5	25.9	23.9	24.3	17,054	16,663
Ontario	36.6	36.5	37.4	37.0	39.9	39.9	19,446	18,970
Manitoba	4.1	4.1	4.2	4.2	3.9	3.9	16,881	16,397
Saskatchewan	3.8	3.8	3.8	3.9	3.6	3.6	16,951	16,520
Alberta	9.1	9.0	9.2	9.2	10.0	10.0	19,692	19,301
British Columbia	11.5	11.4	11.5	11.5	11.8	11.7	18,630	18,072
CANADA	100.0	100.0	100.0	100.0	100.0	100.0	18,187	17,744

VIII. INCOME PRODUCTS AND SERVICES

The national census is an extremely rich source of data on many aspects of Canadian life. These data are a major input towards many important business and policy decisions. These data are used in the analysis of a variety of demographic, social and economic phenomena. However, it is not always possible, at least in terms of cost, for every user to obtain made-to-measure data. Keeping this difficulty in view, Statistics Canada places in the public domain a series of products for use by Canadians. These products consist of both hard copy publications as well as machine readable material.

The census results are published in a set of data and analytical series. Income being one of the most important variable occupies a significant part of these series. Furthermore, income data are often included even in publications on subjects other than income. While it is not possible, due to space limitations, to list complete content of these publications, this Section provides a summary of the available data on income.

1. NATION SERIES

The Nation series is designed to illustrate the scope and depth of the information collected by the 1986 Census. This is achieved by displaying considerable detail on selected variables or, alternatively, by cross-tabulating variables to illustrate the analytical potential of the data.

The series provides national coverage. Most tables include provincial and territorial data but no subprovincial data are presented. In addition, some tables include comparable income data from 1981 and 1986 censuses.

The series consists of 19 publications. Six of these publication are devoted to income characteristics. The contents of the six income publications in the Nation Series are summarized below:

(a) **Total Income: Individuals, Catalogue No. 93-114**

This publication consists of ten tables and presents information for population 15 years and over, showing 1985 individual income size distributions by sex, sources of income, major source of income, marital status, age groups, highest level of schooling, major field of study, period of immigration, mother tongue and ethnic origin. Average income, median income and standard error of average income are also shown. The first table includes 1980 income size

distributions and provides a 1980-1985 income comparison in terms of constant (1985) dollars.

(b) Employment Income: Individuals, catalogue No. 93-115

This publication consists of 11 tables and presents information for population 15 years and over, showing 1985 employment income size distributions by sex, age groups, highest level of schooling, major field of study, mother tongue, official language, number of weeks worked in 1985, work activity in 1985, class of worker and presence of university degree. Tables 10 and 11 show distributions of paid workers by wage and salary size groups, sex, age and weeks worked. The tables include averages, medians and standard errors of average employment income. The first table includes 1980 employment income size distributions and provides a 1980-1985 comparison in terms of constant (1985) dollars.

(c) Employment Income by Occupation, Catalogue No. 93-116

This publication consists of three tables which present information on 1985 employment income by detailed occupation for population 15 years and over. Table 1 presents comparable (constant 1985 dollar) average employment income statistics from the 1981 and 1986 Censuses by sex and detailed occupation. The statistics are presented separately for all persons with employment income and for those who worked full year, full time. Table 2 provides data on the average employment income of full year, full time workers by detailed occupation and sex, age and highest level of schooling. Table 3 shows 1985 average wages and salaries of all paid workers and of those who worked full year, full time in 1985 by sex and detailed occupation.

(d) Family Income: Census Families, catalogue No. 93-117

This publication consists of 15 tables and presents 1985 income size distributions for census families and non-family persons in private households by family structure, sources of income, major source of income, number and combination of employment income recipients, number of persons and work activity, age, level of schooling and period of immigration of husband/parent. One table each for census families and non-family persons also includes 1980 income size distributions from the 1981 Census in constant (1985) dollars.

(e) Family Income : Economic Families, catalogue No. 93-118

This publication consists of 11 tables and presents 1985 income size distributions for economic families and unattached individuals 15 years and over by family structure, family characteristics and the composition of their total income by selected characteristics. Tables 1A and 1B include 1980 income size distributions and provide a 1980-1985 income comparison in constant (1985) dollars. In addition, the publication includes statistics on the incidence of low income among families, unattached individuals and population in private households by a number of variables such as family size, number of children, education and ethnic origin of husband/reference person, sex and age of family members, etc. Also included are the distributions of economic families and unattached individuals by the size of difference between their 1985 income and the applicable low income cut-off.

(f) Household Income: Private Households, catalogue No. 93-119

This publication consists of 10 tables and presents 1985 income size distributions for private households by household type, composition, tenure, number of persons, presence and number of children and selected characteristics such as sex, age, marital status, ethnic origin, level of schooling, etc., of household maintainer. The first table includes 1980 income size distributions and provides a 1980-1985 income comparison in terms of constant (1985) dollars.

2. DIMENSION SERIES

The Dimension series provides information on selected topics for which considerable interest has been expressed. The publications in this series focus on geographic areas (e.g., census metropolitan areas), subpopulations (e.g., immigrants) or a subject (e.g., occupational trends). Data presentation varies from basic summary data to detailed breakdowns and cross-tabulations.

The series consists of seven publications, of which the following three contain income data:

(a) **Profile of Ethnic Groups, Catalogue No. 93-154**

This publication presents data on selected ethnic groups. For each group, single and multiple origins are shown by various demographic, social and economic characteristics. The level of geography is Canada only. Included in the publication are income size distributions of individuals and the average employment income of full-year, full-time and other workers.

(b) **Profile of the Immigrant Population, Catalogue No. 93-155**

This publication provides data on the different characteristics of non-immigrant and immigrant populations for Canada and each province and territory.

Included are total income size distributions for the population 15 years and over by sex, and the number of employment income recipients along with their average employment income in 1985 by sex and work activity.

(c) **Census Metropolitan Areas, Catalogue No. 93-156**

This publication provides data covering a wide range of census variables for the 25 census metropolitan areas (large urban centres) in Canada. Included are income size distributions from the 1981 Census in constant (1985) dollars providing 1980-1985 comparisons for population 15 years and over and for census families. Also included are tables providing 1985 income size distributions for the population 15 years and over by sex and age groups, 1985 employment income size distributions by sex and work activity in 1985, 1985 household income size distributions by household type as well as a table showing income status of the population in private households by economic family status.

3. PROFILE SERIES

The Profile Series presents data on a wide range of census variables for a variety of subprovincial areas. This series is structured into two parts. Part 1 provides basic demographic, housing and family characteristics, while Part 2 presents social,

cultural, labour and income data. The series contains a large number of publications, grouped by geographic areas as follows:

- (a) **Census Divisions and Subdivisions, Catalogue Nos. 94-101 to 94-124**
- (b) **Federal Electoral District, Catalogue Nos. 94-125 and 94-126**
- (c) **Census Metropolitan Areas and Census Agglomerations, Catalogue Nos. 94-127 and 94-128**
- (d) **Urban and Rural Areas, Catalogue Nos. 94-129 and 94-130**
- (e) **Labour Force Survey Economic Regions, Catalogue No. 94-131**
- (f) **Census Tracts, Catalogue Nos. 95-101 to 95-174**

Included in Part 2 of each geographic group are data on the income size distributions of individuals, families and households, average employment income by sex of full-year, full-time and part-year/part-time workers, incidence of low income among economic families and unattached individuals and the composition of income in each area. These data are also available in machine-readable form.

4. METROPOLITAN ATLAS SERIES

The Metropolitan Atlas series covering Canada's major census metropolitan areas, combines maps, graphs and text to present the 1986 Census data on a number of variables. The maps summarize complex statistics and pinpoint areas of concentration. The series consists of 12 Atlases for the following Census Metropolitan areas:

- (a) **St. John's, Catalogue No. 98-101**

- (b) **Halifax, Catalogue No. 98-102**
- (c) **Québec, Catalogue No. 98-103**
- (d) **Montréal, Catalogue No. 98-104**
- (e) **Ottawa-Hull, Catalogue No. 98-105**
- (f) **Toronto, Catalogue No. 98-106**
- (g) **Hamilton, Catalogue No. 98-107**
- (h) **Winnipeg, Catalogue No. 98-108**
- (i) **Regina, Catalogue No. 98-109**
- (j) **Calgary, Catalogue No. 98-110**
- (k) **Edmonton, Catalogue No. 98-111**
- (l) **Vancouver, Catalogue No. 98-112**

Each atlas contains maps on income themes displaying information on family income, household income, incidence of low income of the population in private households and the composition of income.

5. FOCUS ON CANADA SERIES

The publications in Focus on Canada Series provide overviews of a wide variety of subject on which the 1986 Census collected information. The studies have been written by experts, both inside and outside Statistics Canada, in a non-technical language supported by simple tables and attractive charts.

The Series consists of 16 publications of which the following two are devoted to income:

(a) Family Income, Catalogue No. 98-128

This study concentrates on an examination of changes in family income between 1980 and 1985 in terms of constant (1985) dollars by selected characteristics such as family structure, life cycle, work activity and major source of income. The composition of various income classes and the sources of total income are briefly analysed. The study highlights the relative position of various regions and changes in this position between 1970 and 1985.

(b) Employment Income, Catalogue No. 98-129

This study highlights the major differences in the employment income of various population groups. Classified by sex, average employment income is examined by age, marital status, education, work activity and occupation. Provincial differences are presented briefly. The study also includes a short analysis of changes in employment income between 1980 and 1985.

6. PUBLIC USE MICRODATA FILES

Another important product from the 1986 Census consists of microdata files. As was stated in Section IV, the detailed census questionnaire (2B) was given to a 20% sample of all households. The microdata files take a sub-sample of 2B households and place them in the public domain.

These files contain a wide range of data on the population of Canada, the provinces and most metropolitan areas. To ensure and preserve the confidentiality of the data,

the level of detail on certain variables, available on the main Census data base, could not be placed on these files.

These microdata files are unique among census products since they allow the users to return to the data base unit of the census, enabling them to group data to suit their own requirement. As a result, they are a powerful analytical and research tool.

The following three microdata files from the 1986 Census are available:

(a) Households and Housing File

The household microdata file does not show information on all sources of income. Instead, these sources are grouped into household employment income, government transfer payments, investment income and all other income. In addition, the file carries total household income, major source of household income, number of employment income recipients and the number of income recipients in the household. The file also contains data on most of these variables in respect of the household maintainer and his/her spouse and economic family.

(b) Family File

Like the household file, the family microdata file does not show information on all sources of income. Instead, these sources are grouped, for each census family and non-family person, into employment income, government transfer payments, investment income and all other income. In addition, the file carries total income, major source of family income, number of employment income recipients and the number of income recipients in the family and the family's income status. The file also contains data on most of these variables in respect of husbands, wives and lone parents.

(c) Individual File

Except for non-farm and farm self-employment income which are combined into one component, information on all sources of income is available on the individual file. In addition, total income, major source of income, major source of income of each individual's census family, and the total income size group of the individual's census family and household are present in this file.

For details on sampling, content, etc., consult the "Documentation and User's Guide" for the specific file.

7. BASIC SUMMARY TABLES

These data are produced to meet the needs of users who wish to study the characteristics of small areas. Tables provide information on a variety of census variables and are produced for four geographic levels: (i) enumeration areas and federal electoral districts; (ii) census subdivisions (municipalities) and census divisions (counties); (iii) census tracts and provincial census tracts; (iv) Canada, provinces, territories and census metropolitan areas.

There are seven income tables in this set which provide numbers and aggregate and average incomes for population 15 years and over, census families, non-family persons 15 years and over, economic families, unattached individuals and private households, and number, aggregate and average employment income of population 15 years and over who worked in 1985 and reported employment income.

Data on the basic summary tables are also available in machine-readable form to facilitate aggregation and manipulation.

8. OTHER RELATED PRODUCTS

As was mentioned earlier, most analysis of socio-economic characteristics include some income data. In addition, the analysts in the Labour and Household Surveys Analysis Division undertake income analysis which are published as articles in Statistics Canada's quarterly journals **Perspectives on Labour and Income** and **Social Trends**, or as individual papers in the Division's **Staff Reports** and **Analytical Reports**. In addition, there are two other products of which user of Census income data should be aware.

(a) Census Reference Products

The **1986 Census Handbook**, Catalogue No. 99-104, provides an overview by drawing together, in a compact format, all aspects of the Census from historical background to development of questionnaires, processing of the data, final data, various products, etc.

The users will find the **1986 Census Dictionary**, Catalogue No. 99-101, of assistance in understanding ingingingand interpreting the census data and geographic concepts. The **Dictionary** provides a range of definitions for all variables and terms used in 1986 Census data products.

The **1986 Census Products and Services - Final Edition**, Catalogue No. 99-103, provides a complete inventory of the products and services available from the 1986 Census.

(b) Survey of Consumer Finances

Users of Census income data may also know that information on incomes is also collected through the annual Survey of Consumer Finances. Although the Survey does not cover the population in the Yukon and the Northwest Territories and certain other small segments of the population, the Survey and the Census use an identical income concept.

Users should take note of five annual income reports from the Survey: **Income Distributions by Size in Canada**, Catalogue No. 13-207, **Family Incomes, Census Families**, Catalogue No. 13-208, **Income After Tax**, Catalogue No. 13-210, **Earnings of Men and Women**, Catalogue No. 13-217, and **Household Facilities by Income and Other Characteristics**, Catalogue No. 13-218.

IX. HISTORICAL COMPARABILITY

1. CONTENT AND COVERAGE

The Canadian Censuses have a long tradition of collecting some income data. A question on wages and salaries has been asked in every census throughout the present century. However, prior to 1961, census income data were limited to wages and salaries and no information was collected on income from any other source such as self-employment, investment, retirement pensions, government transfer payments, etc.

The 1961 census collected, for the first time, information on total income by source of income, i.e., both earnings from employment and other income. However, the 1961 census did not ask a question on income from farming. Moreover, for income purposes, the coverage in the 1961 census was restricted to a sample of non-farm private households and excluded households in the Northwest Territories. The income reference period in the 1961 census related to the 12 months immediately preceding the census or, if income information could not be provided for that time period, to the previous calendar year, i.e. 1960.

The 1971 census was the first to collect, from a sample of all households, complete information on income from all sources during the previous calendar year. The total income concept was identical in 1981 and 1986 censuses although there were differences in the number and combination of questions asked on the sources of income. But these later censuses excluded the population resident in institutions.

Thus, in terms of content, coverage and reference period, income data from the 1961 and earlier censuses are generally not comparable to data from the 1971, 1981, and 1986 censuses. Income data from the 1971 Census can be compared to those from the later censuses after adjustments for content and coverage have been made. The 1981 and 1986 Censuses are identical in terms of income content and coverage.

Figure 4 provides the relevant details about income sources, reference period, etc., for 1961, 1971, 1981 and 1986 censuses.

2. CURRENT VERSUS CONSTANT DOLLARS

The average income of a family in 1970 was \$9,600; it increased to \$26,700 in 1980 and to \$37,800 in 1985. Thus, family income increased by 178% between 1970 and

1980 and by 41% between 1980 and 1985. However, the value of the dollar also changed during this time.

Figure 4.

Income Content and Coverage in the Censuses of Canada

	<u>Census</u>			
	<u>1961</u>	<u>1971</u>	<u>1981</u>	<u>1986</u>
<u>SOURCES</u>				
Wages and salaries	Yes	Yes	Yes	Yes
Net non-farm self-employment	Yes	Yes	Yes	Yes
Net farm self-employment	No	Yes	Yes	Yes
Family allowances	Yes	Yes	Yes	Yes
Federal child tax credits	No	No	No	Yes
Old Age Security (OAS) and Guaranteed Income Sup (GIS)		Yes ¹	Yes ²	Yes
Benefits from Canada/Quebec Pension Plan (C/QPP)		See fn 1	See fn 2	Yes
Benefits from Unemployment Insurance		3	Yes	Yes
Other income from government sources	Yes	Yes	Yes ⁴	Yes
Interest and dividends	Yes	Yes		See fn 4
Other investment income	Yes	Yes	See fn 4	See fn 4
Retirement pensions, super- annuation, annuities	Yes	Yes	5	Yes
Other money income	Yes	Yes	See fn 5	Yes
<u>REFERENCE PERIOD</u>				
	Jun '60- May '61	1970	1980	1985
<u>SAMPLE SIZE</u>				
	33%	33%	20%	20%
<u>COVERAGE</u>				
	Farm and NWT excluded	All	Institutional population excluded	

¹ Includes OAS, C/QPP and provincial Old Age Assistance.

² Includes C/QPP benefits but provincial income supplements included in "Other income from government sources".

³ Included in "Other income from government sources".

⁴ Includes all investment income.

⁵ Included with "Other money income".

When the changes in the purchasing power of a dollar are taken into account, family income increased by 28% between 1970 and 1980 and dropped by about 1% between 1980 and 1985. It is, therefore, important to take this factor into account when comparing incomes between two periods. One method to do so to adjust incomes by changes in the Consumer Price Index over the period.

C.3



C.3

